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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/566,730

02/02/2006

Yasuyuki Tanaka

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EXAMINER

SCOTT, ANGELA C

ART UNIT

PAPER NUMBER

1796

NOTIFICATION DATE

DELIVERY MODE

05/13/2009

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

mailroom@bskb.com

<b>Office Action Summary</b>	<b>Application No.</b> 10/566,730	<b>Applicant(s)</b> TANAKA ET AL.	
	<b>Examiner</b> Angela C. Scott	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 17 February 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-7 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 and 3-7 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>10/24/2008</u>  | 6) <input type="checkbox"/> Other: _____                          |

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### **DETAILED ACTION**

Applicant's response of February 17, 2009 has been fully considered. Claims 1 and 7 have been amended and claims 1 and 3-7 are pending.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1 and 3-7 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification describes the final product as a being one that does not contain allergic proteins which cause Type I allergies. However, it never describes the starting material as anything other than a natural rubber, which is a genus containing all types of natural rubbers, i.e., ones that cause Type I allergies and ones that do not. Therefore, while the end product is described as one that does not cause Type I allergies, the starting material is not described in any detail other than simply natural rubber.

#### ***Claim Rejections - 35 USC § 103***

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornish (US 5,580,942) in view of Hamada et al. (JP 2001-122906) as evidenced by Cornish et al. (Enc. Poly. Sci. and Tech., 2004, John Wiley and Sons). For convenience, the citations below are from the English translation of the Japanese reference.

Regarding claim 1, Cornish recites a low allergic natural rubber which is substantially free of any hypoallergenic proteins (i.e. it dose not contain proteins corresponding to the bands

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of 14, 31, and 45 kDa which are known to cause Type I allergies) (Col. 4, lines 45-64 and Figure 8). Cornish et al. teaches the Guayle and Ficus rubbers used in Cornish have proteins between 6.6 kDa and 200 kDa (Figure 8).

Cornish does not teach a natural rubber having a nitrogen content of 0.02 to 0.30% by weight of natural rubber. However, Hamada et al. teaches a deproteinized natural rubber with a reduced nitrogen content of less than or equal to 0.1% by weight of the rubber (§13). Cornish and Hamada et al. are analogous art because they are from a similar technical difficulty, namely, making hypoallergenic natural rubbers. At the time of the invention, a person of ordinary skill in the art would have found it obvious to reduce the nitrogen content in a natural rubber to this level, as taught by Hamada et al., in the natural rubber of Cornish, and would have been motivated to do so because having a nitrogen content of less than or equal to 0.1% is good evidence that the rubber will not cause an allergic reaction (§14).

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Cornish (US 5,580,942) in view of Hamada et al. (JP 2001-122906) as evidenced by Cornish et al. (Enc. Poly. Sci. and Tech., 2004, John Wiley and Sons). For convenience, the citations below are from the English translation of the Japanese reference.

Regarding claim 7, Cornish recites a low allergic natural rubber which is substantially free of any hypoallergenic proteins (i.e. proteins of the band of 14, 31, and 45 kDa) (Col. 4, lines 45-64). Cornish et al. teaches the Guayle and Ficus rubbers used in Cornish has proteins between 6.6 kDa and 200 kDa (Figure 8).

Cornish does not teach a deproteinized natural rubber having a nitrogen content of 0.02 to 0.30% by weight of natural rubber. However, Hamada et al. teaches a deproteinized natural rubber with a reduced nitrogen content of less than or equal to 0.1% by weight of the rubber (§13). Cornish and Hamada et al. are analogous art because they are from a similar technical difficulty, namely, making hypoallergenic natural rubbers. At the time of the invention, a person of ordinary skill in the art would have found it obvious to reduce the nitrogen content in a natural rubber to this level, as taught by Hamada et al., in the natural rubber of Cornish, and would have been motivated to do so because having a nitrogen content of less than or equal to 0.1% is good evidence that the rubber will not cause an allergic reaction (§14).

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Claims 3-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cornish (US 5,580,942) in view of Hamada et al. (JP 2001-122906) as evidenced by Cornish et al. (Enc. Poly. Sci. and Tech., 2004, John Wiley and Sons) as applied to claim 1 above, and further in view of Tanaka et al. (US 6,355,407).

Cornish, Hamada et al. and Cornish et al. collectively teach the rubber of claim 1 as shown above.

Regarding claim 3, Cornish does not teach the natural rubber having a green strength of 0.1 to 3 MPa. However, Tanaka et al. teaches a deproteinized natural rubber having a green strength of at least 1 MPa (Col. 10, lines 66-67 and Col. 11, line 1). Cornish and Tanaka et al. are analogous art because they are from the same field of endeavor, namely, making hypoallergenic natural rubber. At the time of the invention, a person of ordinary skill in the art would have found it obvious to make the natural rubber, as taught by Cornish, have a green strength of at least 1 MPa, as taught by Tanaka et al., and would have been motivated to do so because a natural rubber having an elevated green strength possesses excellent processing characteristics in kneading and sheeting (Col. 11, lines 5-7).

Regarding claims 4 and 5, Cornish does not teach combining a deproteinized natural rubber with another rubber, more specifically, conventional synthetic rubbers such as SBR, NBR, BR, IR, EPR, EPDM, or IIR. However, Tanaka et al. teaches that a low protein natural rubber can be combined with other common components, specifically, conventional synthetic rubbers, and used as a rubber composition (Col. 11, lines 44-48). At the time of the invention, a person of ordinary skill in the art would have found it obvious to combine the low protein natural rubber, as taught by Cornish, with conventional synthetic rubbers and use it in rubber compositions, as taught by Tanaka et al., and would have been motivated to do so because the low protein natural rubber has excellent processing characteristics (Col. 3, lines 61-62).

Regarding claim 6, Cornish does not teach using the natural rubber in a tire. However, Tanaka et al. teaches using a deproteinized natural rubber in a tire (Col. 11, lines 41-42). At the time of the invention, a person of ordinary skill in the art would have found it obvious to use the low protein natural rubber, as taught by Cornish, in a tire, as taught by Tanaka et al., and would

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have been motivated to do so because the low protein natural rubber has excellent processing characteristics (Col. 3, lines 61-62).

### ***Response to Arguments***

Applicant's arguments filed February 17, 2009 have been fully considered but they are not persuasive.

Applicant argues that guayule rubber taught in Cornish '942 and hevea rubber, as they are found in nature, are different because the guayule rubber does not cause Type I allergies whereas the hevea rubber does. Therefore, since Applicants have added the limitation that the natural rubber starting material causes Type I allergies, it cannot be guayule rubber which is taught in Cornish '942. This argument is unpersuasive. The claim is directed toward a natural rubber that does not contain proteins specified by the bands of 14, 31, and 45 kDa, i.e., does not contain proteins that cause Type I allergies. This is an end product that is specified and that on which patentability is based. The patentability of a product does not depend on its method of production (MPEP 2113). Furthermore, as evidenced by Baranek (US 2002/0193490), hevea and guayule rubbers can be used as natural rubbers in manufacturing (§24). Therefore, since it has not been shown that a different final composition is produced by starting with hevea rubber as opposed to guayule rubber, the argument is unpersuasive.

Applicant argues that the references of Cornish '942, Hamada, and Tanaka are not combinable because Cornish '942 uses a guayule rubber whereas Hamada and Tanaka use hevea rubber. Hamada is used to teach why one would want a natural rubber with a low nitrogen content, regardless of the type of natural rubber, and Tanaka teaches green strength, combining the natural rubber with other rubbers and using the rubber in a tire, again, none of which are dependent upon which type of natural rubber is used. Especially, since as described above, the end product is the same regardless of what type of natural rubber you start with.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### *Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Angela C. Scott whose telephone number is (571) 270-3303. The examiner can normally be reached on Monday through Friday, 8:30am to 5:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/  
Supervisory Patent Examiner, Art Unit 1796

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Examiner, Art Unit 1796